

What is claimed is:

1. A method of printing an image with a printing plate prepared from a printing plate precursor, which comprises a support having thereon an image forming layer A containing a water-soluble material, the method comprising the steps of:

(a) imagewise exposing the layer A of the printing plate precursor so as to form an unexposed portion and an exposed portion;

(b) supplying an emulsion ink containing an oil-based ink and water onto the layer A so that the unexposed portion is removed from the layer A so as to form a non image portion and the exposed portion remains in the layer A so as to form an image portion to give the printing plate, wherein the image portion is lyophilic and the non image portion is hydrophilic; and

(c) printing the image on the printing plate to an image receiving material while further supplying the emulsion ink.

2. The method of claim 1, wherein the water-soluble material in the layer A is a saccharide.

3. The method of claim 1, wherein the printing plate precursor further comprises a hydrophilic layer B between the support and the layer A, wherein the layer A further comprises heat-fusible particles or thermoplastic particles.
4. The method of claim 3, wherein the water-soluble material in the layer A is an oligosaccharide.
5. The method of claim 3, wherein the hydrophilic layer B is a porous layer.
6. The method of claim 3, wherein the hydrophilic layer B further comprises a light-heat conversion material.
7. The method of claim 1, wherein the printing plate precursor further comprises a layer C which is capable of being ablated and a hydrophilic layer B on the support in that order, the layer A being located on the layer B.
8. The method of claim 7, wherein the water-soluble material in the layer A is a polysaccharide.

9. The method of claim 1, wherein the printing is carried out without supplying water on the surface of the printing plate during printing.

10. The method of claim 1, wherein water is supplied on the surface of the printing plate precursor prior to supplying the emulsion ink on the surface of the printing plate precursor.

11. The method of claim 10, wherein water is supplied with a water spraying device on the surface of the printing plate precursor.

12. The method of claim 11, wherein an amount of water W (g/m^2) supplied on the surface of the printing plate precursor and a coating coverage Q (g/m^2) of the layer A satisfy the following formula,

$$0.1 \leq W/Q \leq 50.$$

13. The method of claim 1, wherein the step (a) is carried out after the printing plate precursor is mounted on a plate cylinder of a printing press.

14. The method of claim1, wherein an infrared laser is employed for imagewise exposing the printing plate precursor.

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